PERCENTAGE LOG OF WATER-WELL CUTTINGS UTAH GEOLOGICAL SURVEY

DWRi Appropriation #: 06-05-014-M00 Well Owner: Lisbon Valley Mining Co. LLC

Location: (D-30-25)23, San Juan County, Utah Win #: 428715

Driller: Midway Drilling Geologist: Janae Wallace, 6/22/09

	: IVIIUW	ay Dilli	mg				Geologist: Janae Wanace, 6/22/09
Ra	Depth Range (feet)		PER	CENT	AGES		
(1			on*	dis* consolidated			COMMENTS
			gr*	css*	slt*	ss*	
0	10	10	90	0	0	0	red clay with tan and gray gravel; gravel is angular to subrounded and consists of siltstone, sandstone, and chert; maximum clast size (MCS) is 3 cm, average clast size (ACS) is 0.5 cm; calcareous
10	20	20	80	0	0	0	"MCS is 1.5 cm, ACS is 0.5 cm
20	30	90	10	0	0	0	"MCS is 3 m, ACS is 0.5 cm
30	40	100	tr	0	0	0	green and purple clay with minor sand composed of quartz, feldspar, and lithic fragments; trace gravel; calcareous
40	50	10	90	0	0	0	purple and red clay with siltstone and sandstone gravel; gravel is angular to rounded; MCS is 1.5 cm, ACS is 1 cm
50	60	0	0	0	2	98	pink-red and red sandstone with minor siltstone; sandstone is medium grained and consists of quartz, feldspar, lithic fragments, and mafic minerals; calcareous; Burro Canyon Formation?
60	70	0	0	80	10	10	red clay with white and purple sandstone and siltstone; calcareous
70	80	0	0	0	2	98	gray and yellow-tan medium grained sandstone composed of quartz, feldspar, and chert; minor red siltstone; calcareous

^{*}uncon=unconsolidated; dis=disaggregated; slt=siltstone; ss=sandstone; ⁺estimated clast size may not reflect actual size due to drill-bit action

Ra	Depth Range (feet)		PEF	RCENT	AGES		
(f			uncon*		dis* consolidated		COMMENTS
			gr*	css*	slt*	ss*	
80	90	0	0	0	0	100	gray-pink, gray-green, and yellow sandstone; sandstone is medium grained and consists of quartz, feldspar, and chert; calcareous
90	100	0	0	0	0	100	" grayish green, grayish yellow, and tan
100	110	0	0	0	5	95	gray and yellow medium grained sandstone and yellow siltstone; slightly calcareous
110	120	0	0	100	0	0	green and yellow clay with obscured sand grains; trace pyrite; calcareous
120	130	0	0	0	5	95	pink-red, purple, and gray very fine sandstone and siltstone; calcareous
130	140	0	0	5	5	90	pink-red, purple-gray, and green-gray clay, mudstone, and sandstone; sandstone is fine to medium grained and composed of quartz, feldspar, and chert; calcareous
140	150	0	0	0	98	2	red siltstone and mudstone with minor white- gray sandstone; calcareous
150	160	0	0	0	100	tr	" trace sandstone
160	170	0	0	0	2	98	pink-tan, yellow-tan, and minor red sandstone and siltstone; sandstone is fine to medium grained and consists of quartz, feldspar, and minor mafic minerals; calcareous
170	180	0	0	0	0	100	yellow and minor gray and pink sandstone; sandstone is fine- to medium-grained and consists of quartz, feldspar, and chert; non calcareous
180	190	0	0	0	2	98	" and pale olive green mudstone
190	200	0	0	0	10	90	"

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Ra	Depth Range (feet)		PER	RCENT	AGES		
(f			uncon*		dis* consolidated		COMMENTS
			css* gr*		slt* ss*		
200	210	0	0	0	0	100	yellow and minor gray and pink sandstone; sandstone is fine- to medium grained and consists of quartz, feldspar, and chert; non calcareous
210	220	0	0	0	90	10	purple-red and minor yellow siltstone and sandstone; slightly calcareous
220	230	0	0	0	100	0	purple-red and minor green-white siltstone and mudstone; calcareous
230	240	0	0	0	100	tr	" trace sandstone
240	250	0	0	0	25	75	red, pink-gray, and green fine-grained sandstone, siltstone, and mudstone; calcareous
250	260	0	0	0	2	98	pink and red with minor green-gray sandstone with minor siltstone; sandstone is fine to coarse grained and consists of quartz, feldspar, mafic minerals, and lithic fragments; calcareous
260	270	0	0	0	5	95	" pink and red
270	280	0	0	0	20	80	"
280	290	0	0	0	98	2	red and minor pink mudstone and siltstone with minor sandstone; calcareous
290	300	0	0	0	95	5	"
300	310	0	0	0	5	95	pink and minor red sandstone and minor siltstone; sandstone is fine to medium grained and consists of quartz, feldspar, mafic minerals, and lithic fragments; calcareous
310	320	0	0	0	50	50	"
320	330	0	0	0	50	50	"

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Depth Range			PER	RCENT	AGES		
(f	(feet)		uncon*		dis* consolidated		COMMENTS
			css* gr*		css* slt* ss*		
330	340	0	0	0	90	10	46
340	350	0	0	0	95	5	46
350	360	0	0	0	80	20	"
360	370	0	0	0	100	tr	red mudstone/siltstone; trace sandstone; calcareous
370	380	0	0	0	98	2	pink and red sandstone and siltstone; sandstone is fine to medium grained and consists of quartz, feldspar, mafic minerals, and lithic fragments; calcareous
380	390	0	0	0	50	50	" trace pyrite
390	400	0	0	0	50	50	66
400	410	0	0	0	10	90	red, gray-white, and yellow quartz-rich sandstone with mudstone and siltstone; some chert; calcareous
410	420	0	0	0	0	100	yellow quartz-rich sandstone with minor chert; non calcareous
420	430	0	0	0	tr	100	" trace siltstone
430	440	0	0	0	tr	100	"
440	450	0	0	0	10	90	yellow and red quartz-rich sandstone and siltstone; some chert; calcareous
450	460	0	0	0	tr	100	" trace siltstone
460	470	0	0	0	90	10	red mudstone and siltstone with minor white- pink sandstone; calcareous
470	480	0	0	0	98	2	" red with greenish gray and pink

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Ra	Depth Range (feet)		PER	CENT	AGES		
(1			uncon*		is* consolidated		COMMENTS
			css* gr*		slt*	ss*	
480	490	0	0	0	100	tr	red siltstone and trace green-gray fine-grained sandstone; calcareous
490	500	0	0	0	95	5	red and minor greenish-gray siltstone and fine- grained sandstone; slightly calcareous
500	510	0	0	0	100	0	" no sandstone
510	520	0	0	0	100	0	"
520	530	0	0	0	50	50	red and gray-white sandstone and siltstone; slightly calcareous
530	540	0	0	0	2	98	gray-white quartz-rich sandstone and red siltstone; some black chert; slightly calcareous
540	550	0	0	0	20	80	"
550	560	0	0	0	50	50	"
560	570	0	0	0	50	50	"
570	580	0	0	0	50	50	"
580	590	0	0	0	25	75	"
590	600	0	0	0	10	90	"
600	610	0	0	0	tr	100	"trace siltstone
610	620	0	0	0	tr	100	"
620	630	0	0	0	2	98	gray-white quartz-rich sandstone and red siltstone; some black chert; trace pyrite; slightly calcareous
630	640	0	0	0	tr	100	" no siltstone
640	650	0	0	0	tr	100	66

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Ra	Depth Range (feet)		PEF	RCENT	AGES		
(f			uncon*		dis* consolidated		COMMENTS
			gr*	css*	slt*	ss*	
650	660	0	0	18	2	80	gray sand and sandstone and minor red siltstone; non calcareous
660	670	0	0	10	10	80	46
670	680	0	0	10	10	80	"
680	690	0	0	0	50	50	gray and red sandstone and siltstone; slightly calcareous
690	700	0	0	0	50	50	٠٠
700	710	0	0	10	0	90	gray-tan and red fine-grained sandstone ands sand; calcareous
710	720	0	0	0	tr	100	gray-tan and white fine-grained sandstone; trace siltstone; non calcareous
720	730	0	0	0	tr	100	"
730	740	0	0	0	tr	100	"
740	750	0	0	0	tr	100	٠٠
750	760	0	0	0	tr	100	
760	770	0	0	0	tr	100	" fine to medium grained sandstone
770	780	0	0	0	tr	100	
780	790	0	0	0	tr	100	
790	800	0	0	0	tr	100	
800	810	0	0	0	5	95	gray and green quartz-rich sandstone and mudstone; trace pyrite; sand is fine to medium grained; non calcareous
810	820	0	0	0	tr	100	" trace mudstone
820	830	0	0	0	tr	100	"

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Depth Range (feet)			PER	CENT	AGES		
		uncon*		dis* consolidated		lidated	COMMENTS
	1		gr*	css*	slt* ss*		
830	840	0	0	0	tr	100	٠٠
840	850	0	0	10	tr	90	tan-yellow and gray sand and sandstone; trace pink and green siltstone; non calcareous
850	860	0	0	0	tr	100	gray-tan and white fine-grained sandstone; trace siltstone; non calcareous
860	870	0	0	0	tr	100	"
870	880	0	0	0	tr	100	٠.
880	890	0	0	0	5	95	tan-yellow, gray, and red fine to medium grained sandstone and siltstone; trace pyrite; non calcareous
890	900	0	0	0	2	98	

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